

FIG. 3A

SHORT RANGE

LONG RANGE

SCAN FIELD

OBJECT DETECTION FIELD

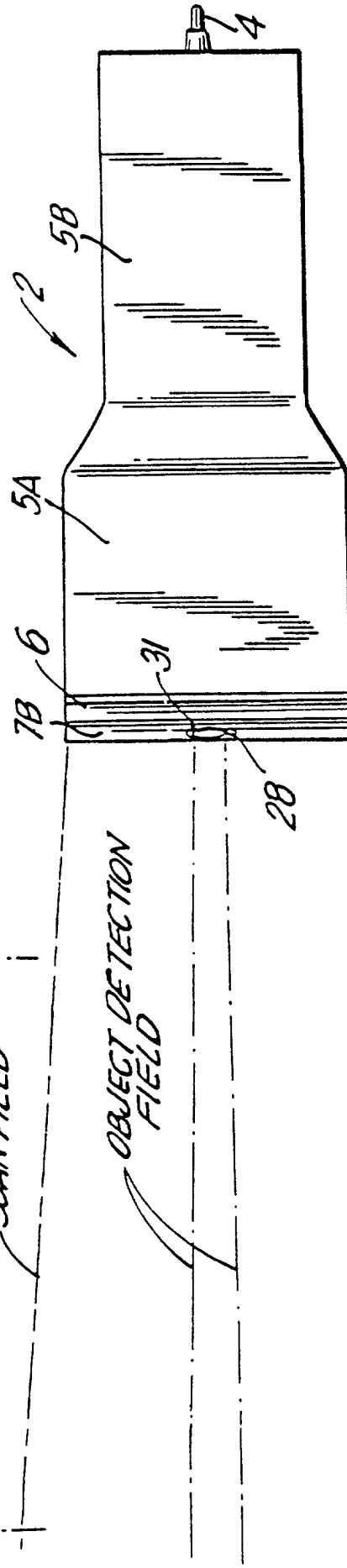


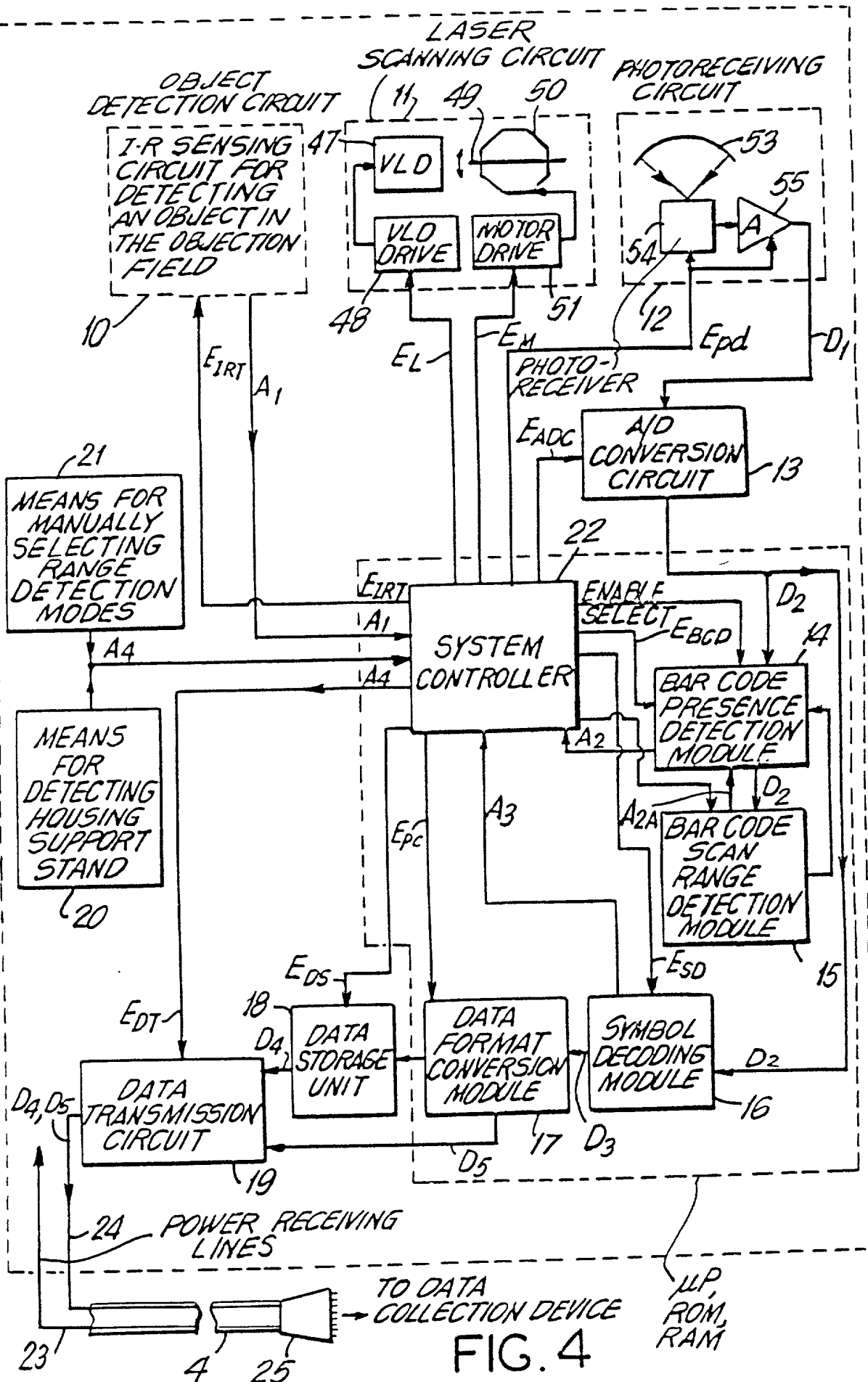
FIG. 3B

SHORT RANGE

LONG RANGE

SCAN FIELD

FIG. 4 is a block diagram of a system for detecting and scanning objects in a field. The system includes a laser scanning circuit, a photoreceiving circuit, an object detection circuit, and a data processing unit. The laser scanning circuit (11, 49, 50) includes a VLD (47), VLD DRIVE (48), and MOTOR DRIVE (51). The photoreceiving circuit (53, 55) includes a PHOTO-RECEIVER (54) and an A/D CONVERSION CIRCUIT (13). The object detection circuit (10) includes an I-R SENSING CIRCUIT FOR DETECTING AN OBJECT IN THE OBJECTION FIELD (47). The data processing unit (22) includes a SYSTEM CONTROLLER (22), a BAR CODE PRESENCE DETECTION MODULE (14), a BAR CODE SCAN RANGE DETECTION MODULE (15), a DATA STORAGE UNIT (18), a DATA FORMAT CONVERSION MODULE (17), and a SYMBOL DECODING MODULE (16). The system also includes a MEANS FOR MANUALLY SELECTING RANGE DETECTION MODES (21) and a MEANS FOR DETECTING HOUSING SUPPORT STAND (20). The system is connected to a DATA TRANSMISSION CIRCUIT (19) and a POWER RECEIVING LINES (24). The system is also connected to a DATA COLLECTION DEVICE (23, 25) and a MICROPROCESSOR (26) with ROM and RAM.



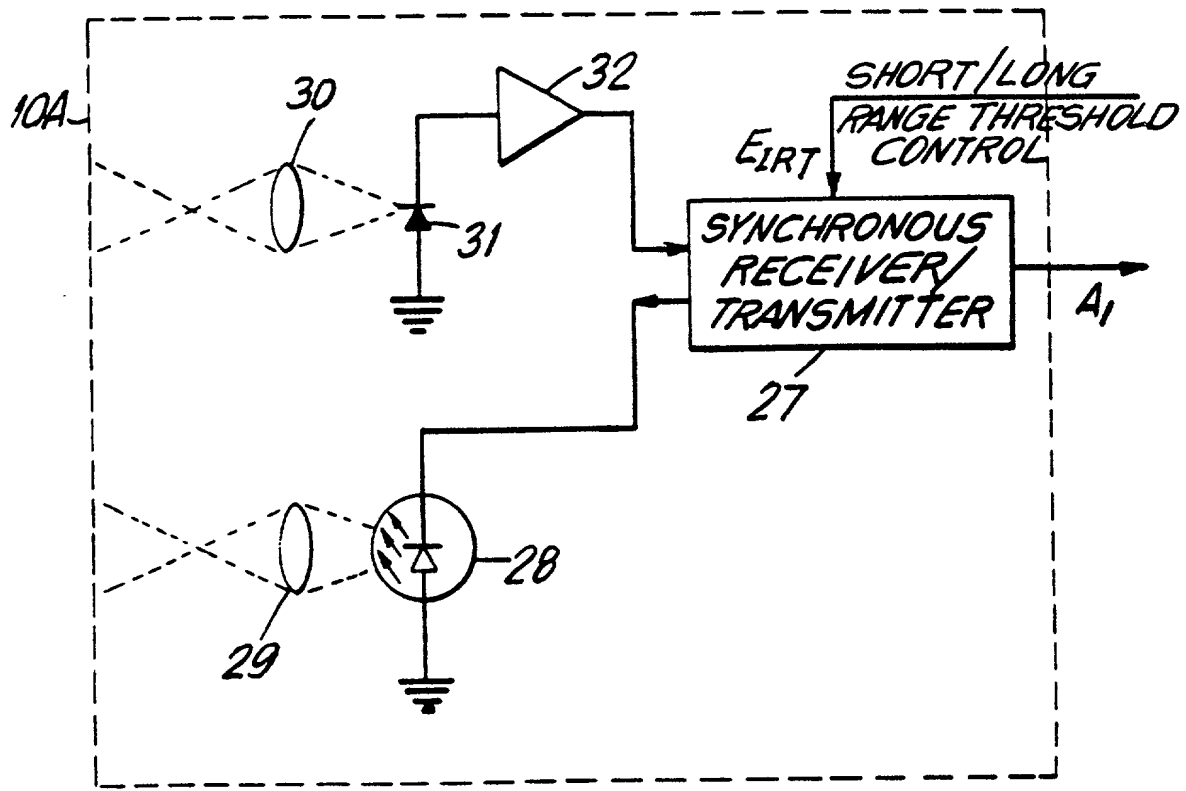


FIG. 5

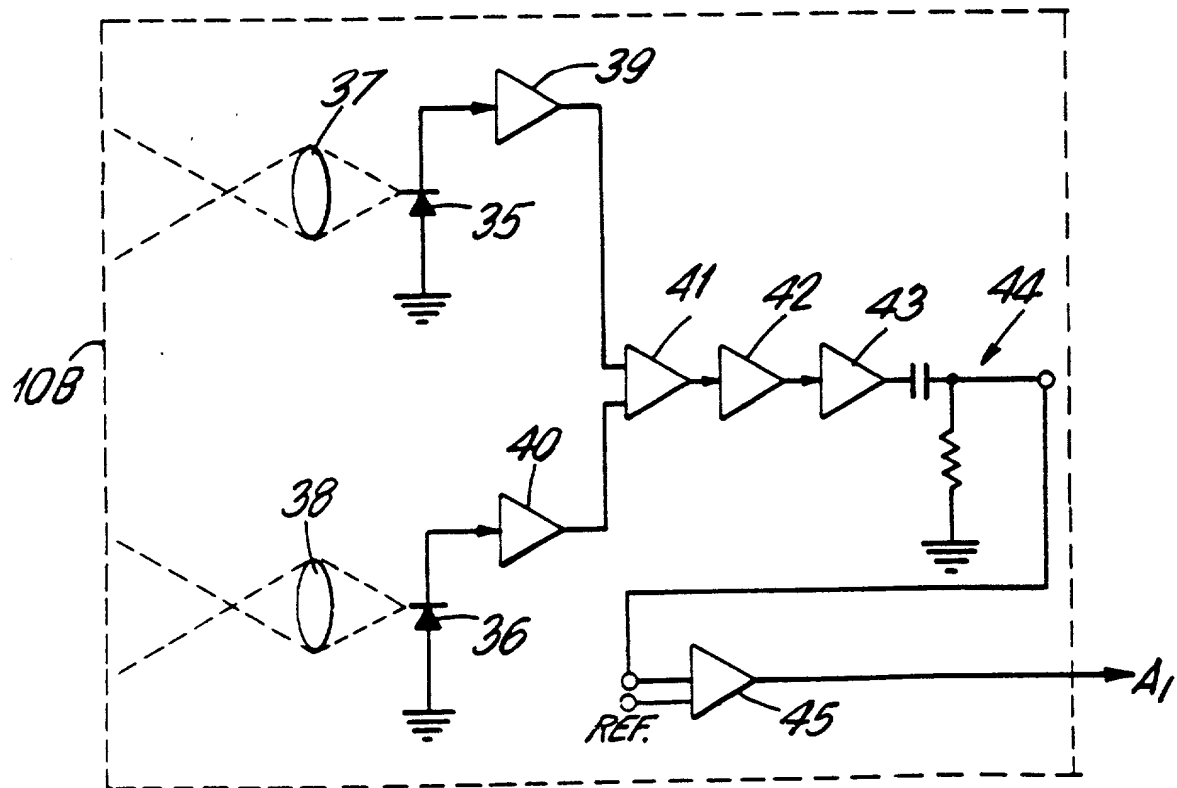


FIG. 6

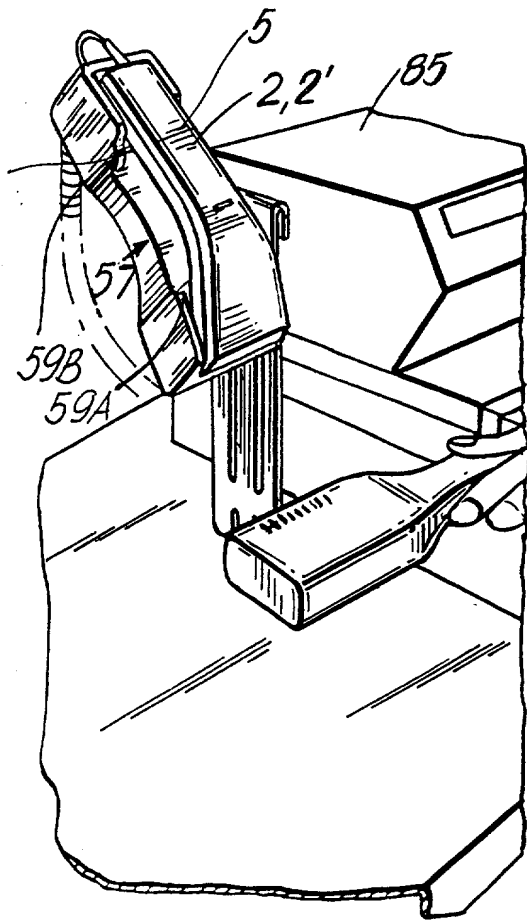


FIG. 7A

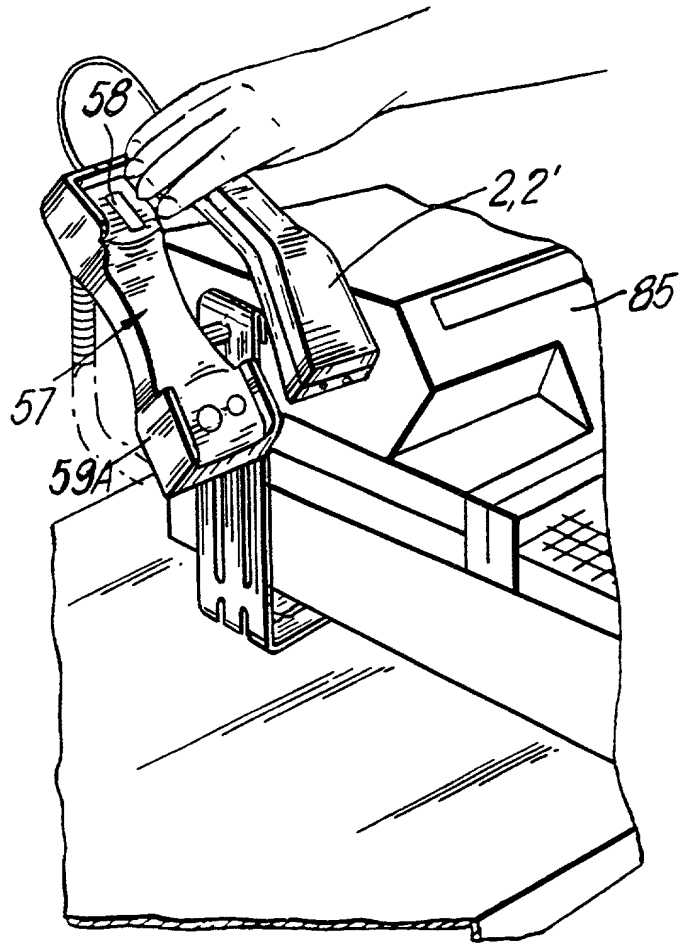


FIG. 7B

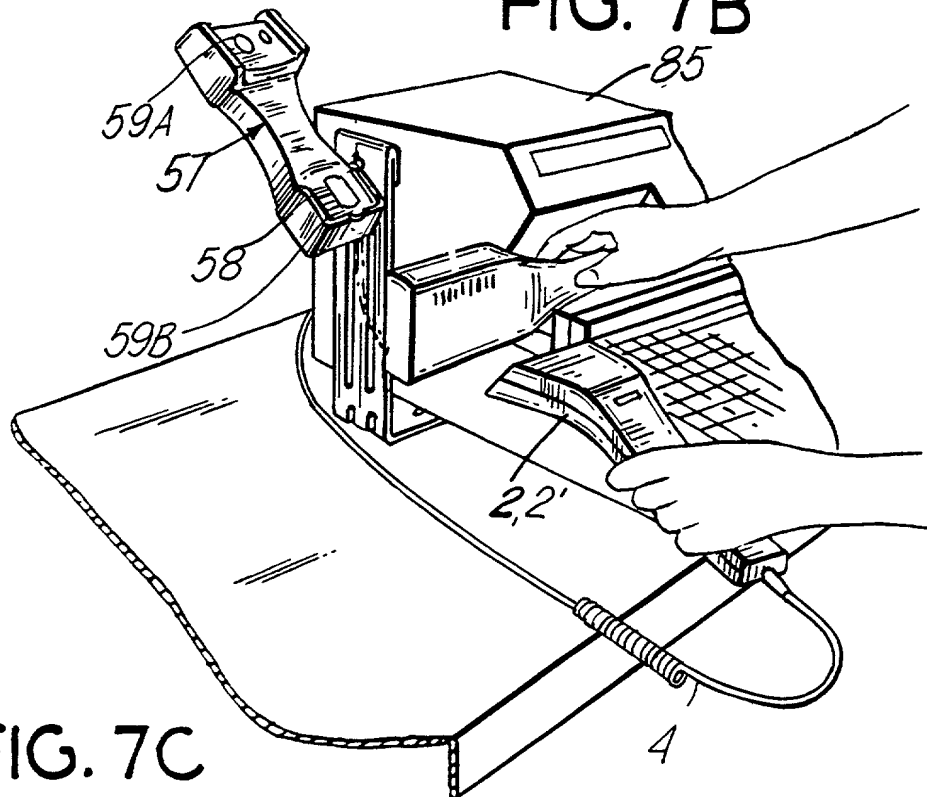


FIG. 7C

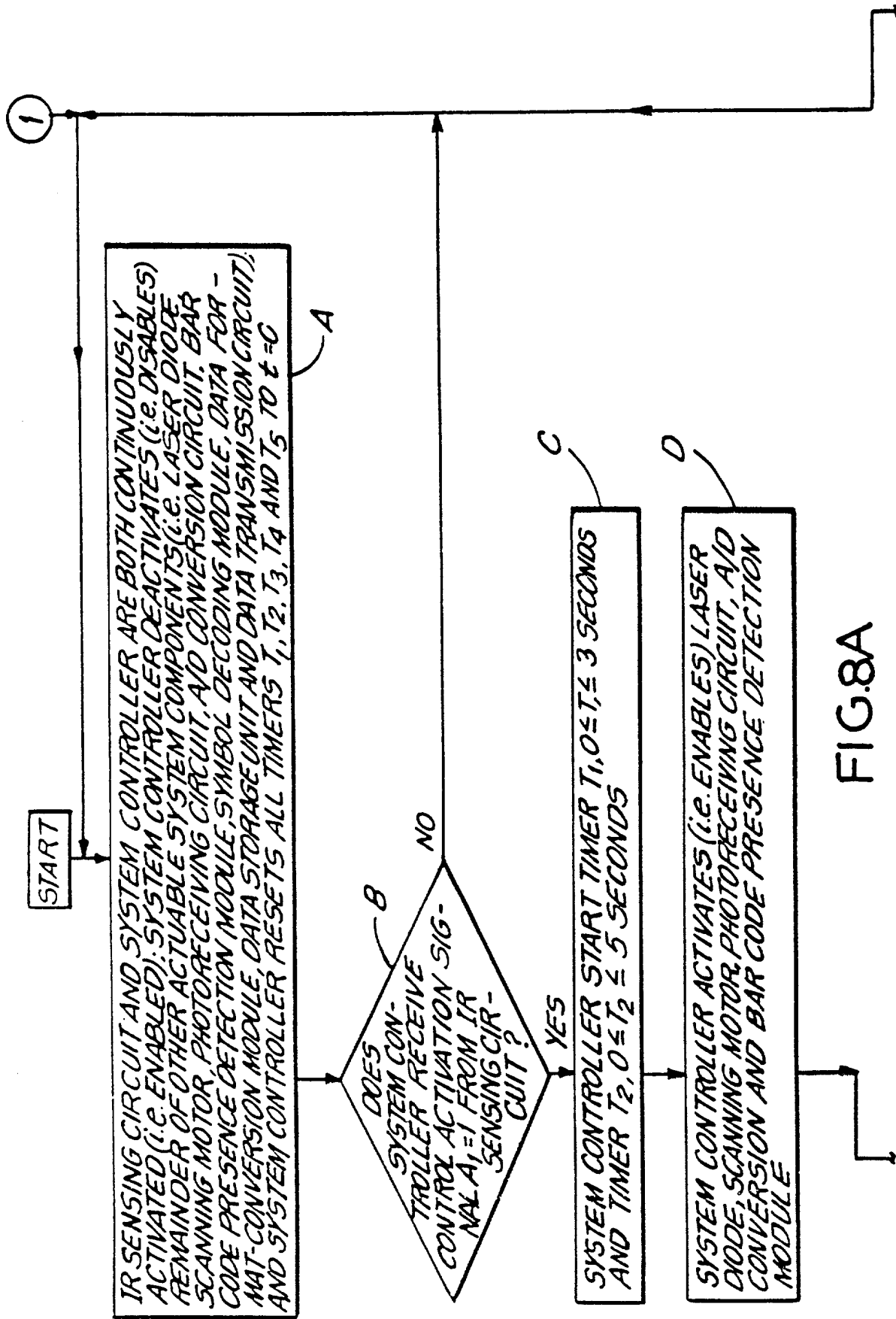


FIG. 8A

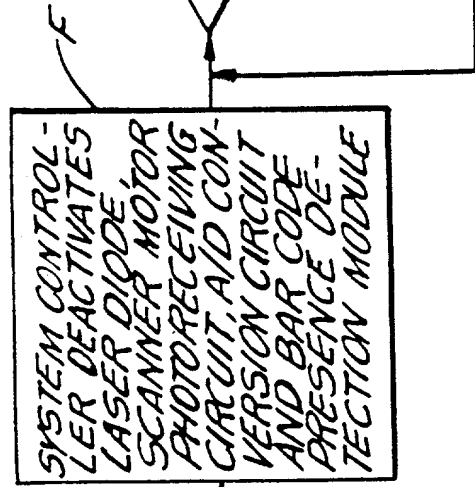
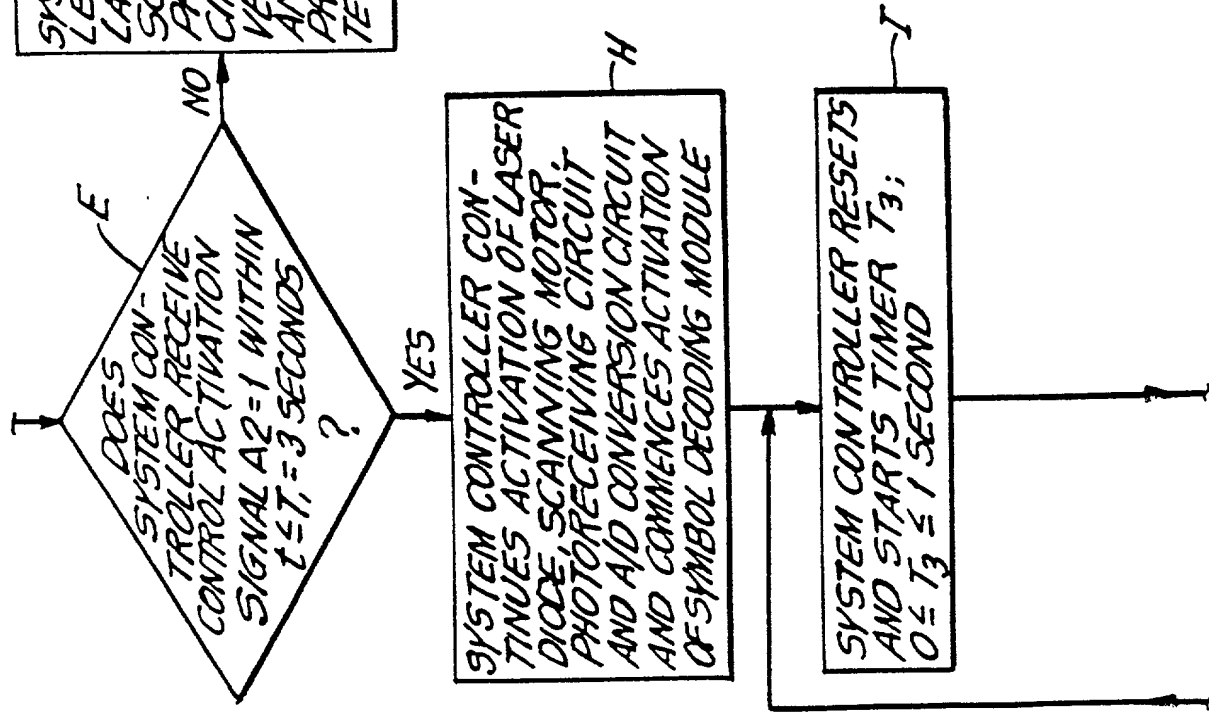
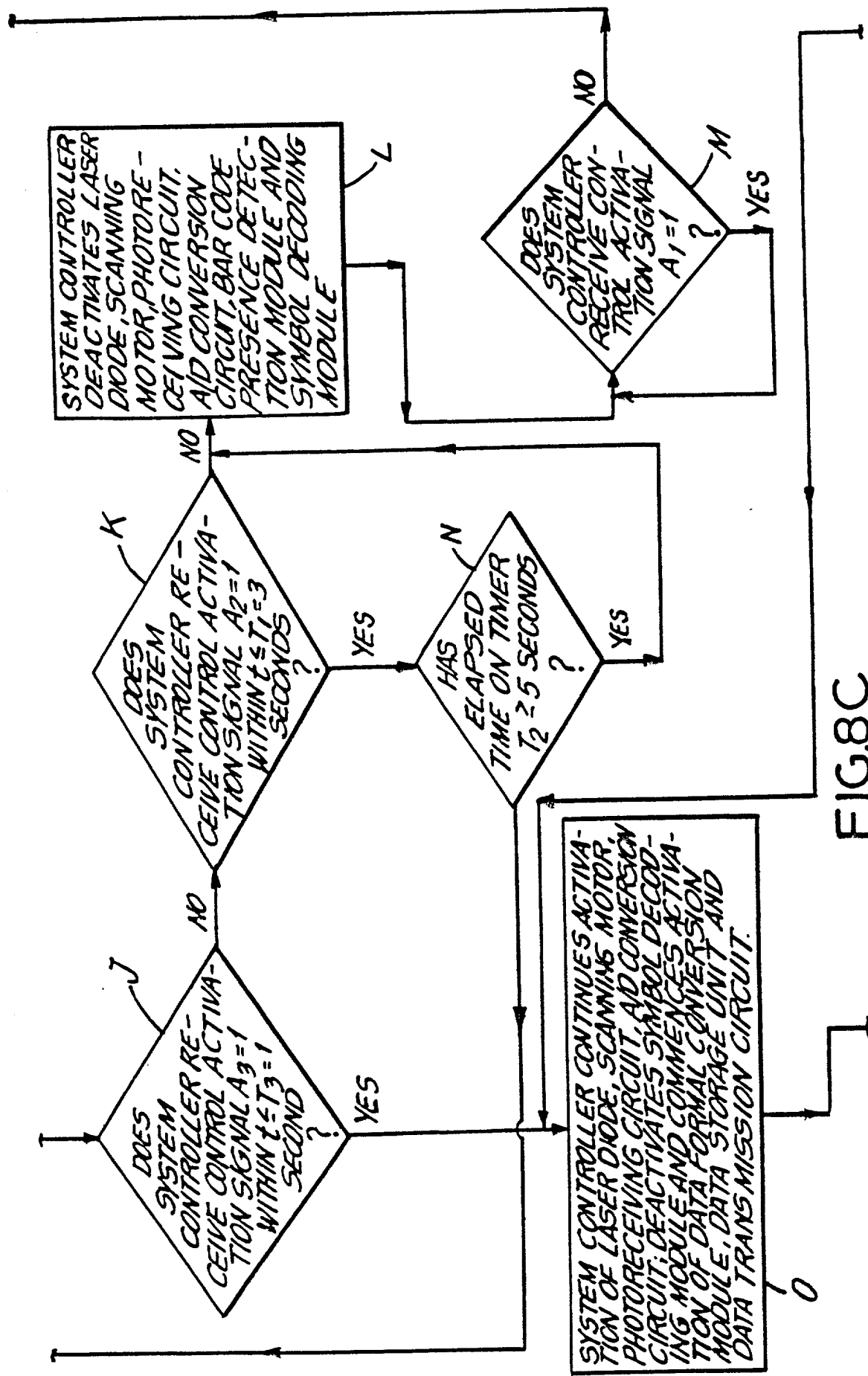


FIG.8B





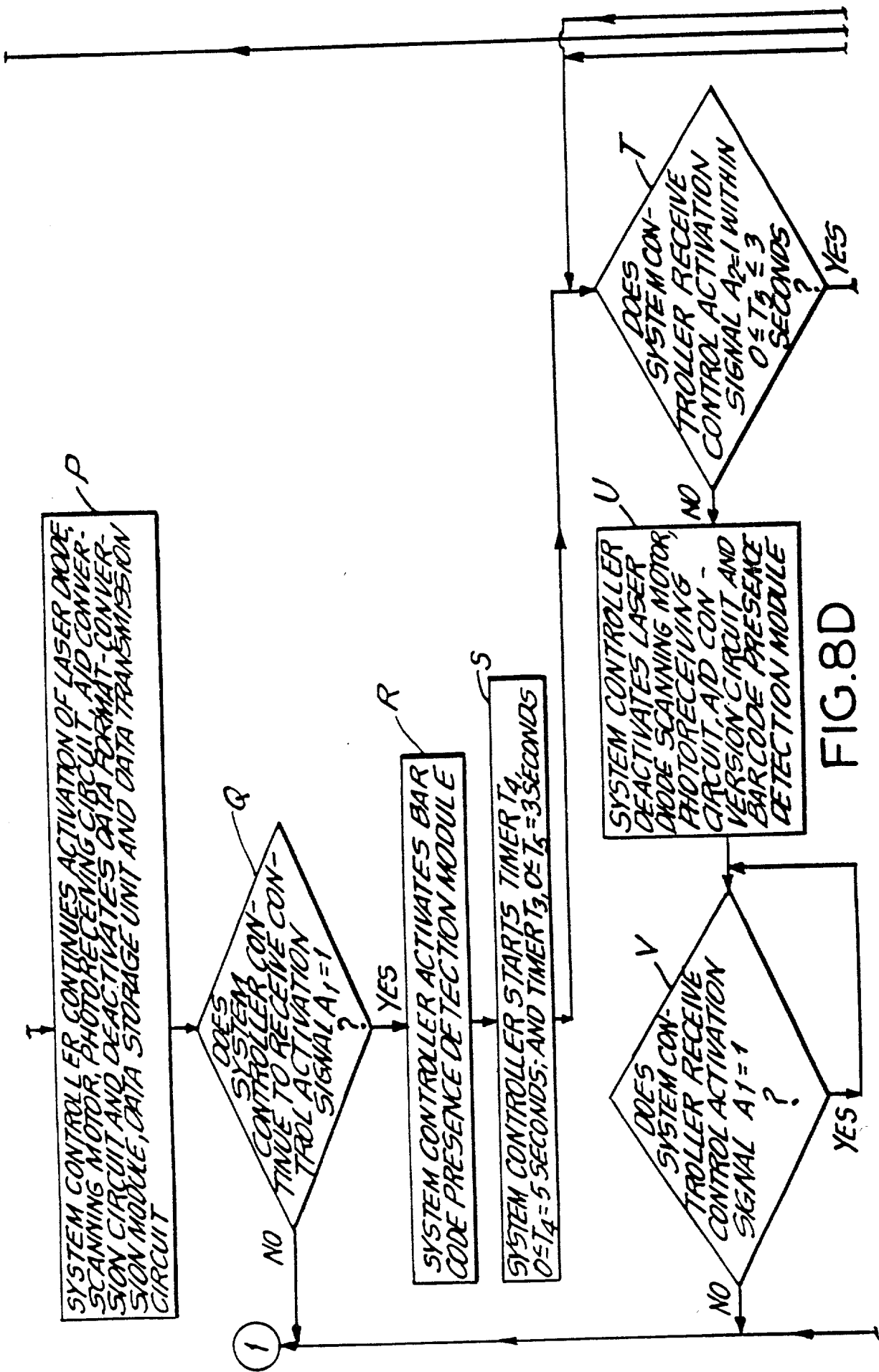


FIG. 8D

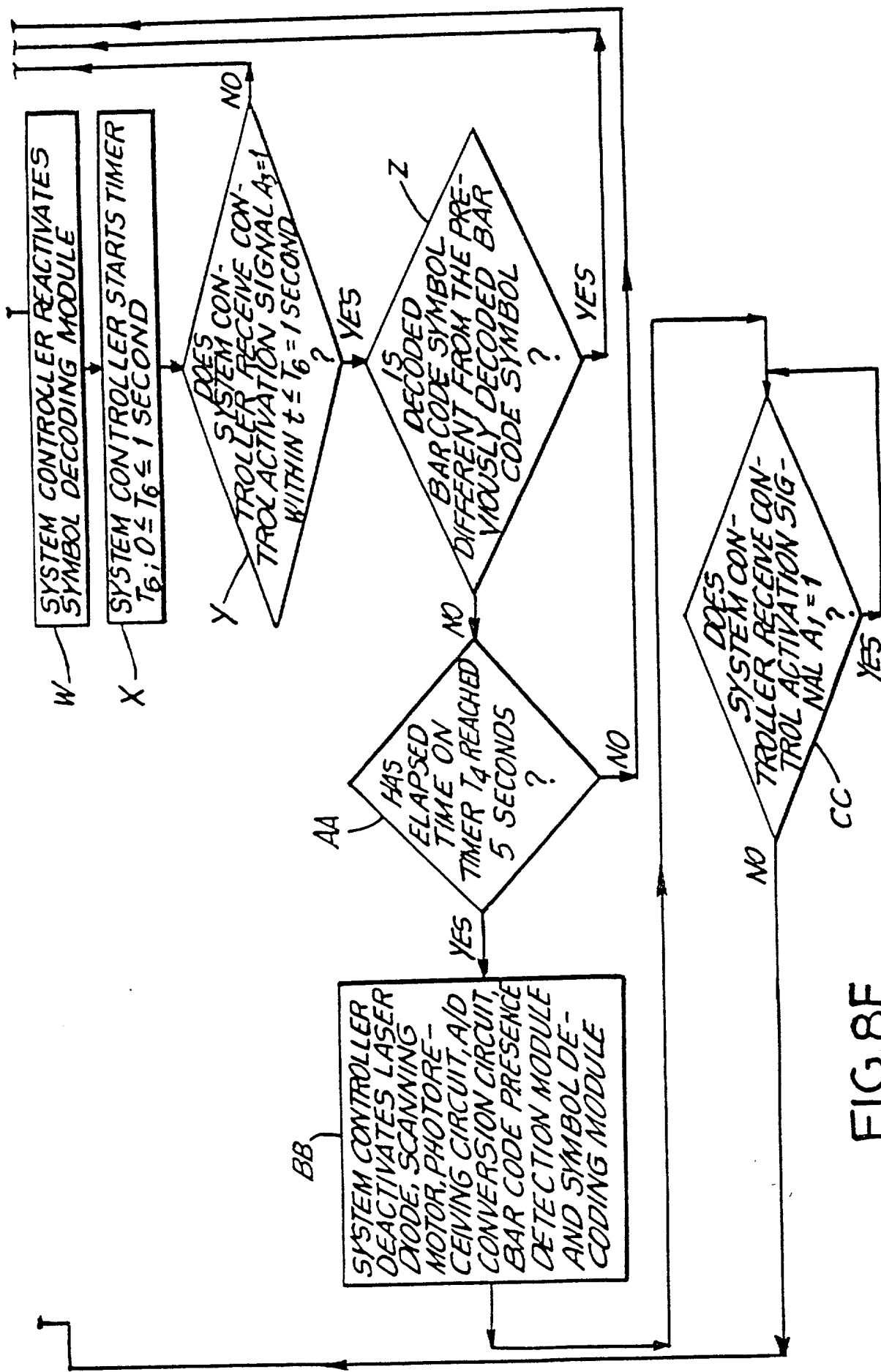


FIG. 8E

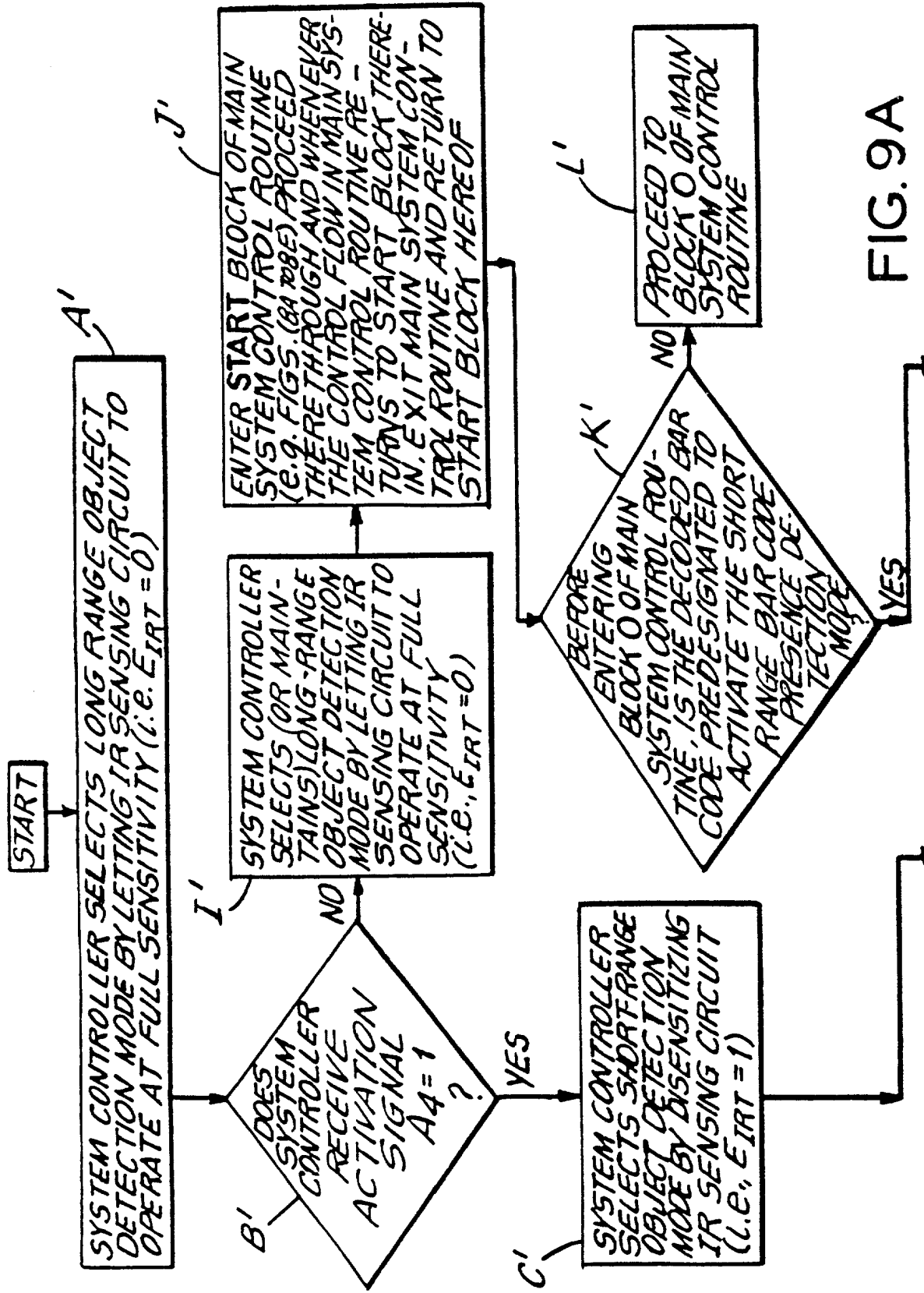
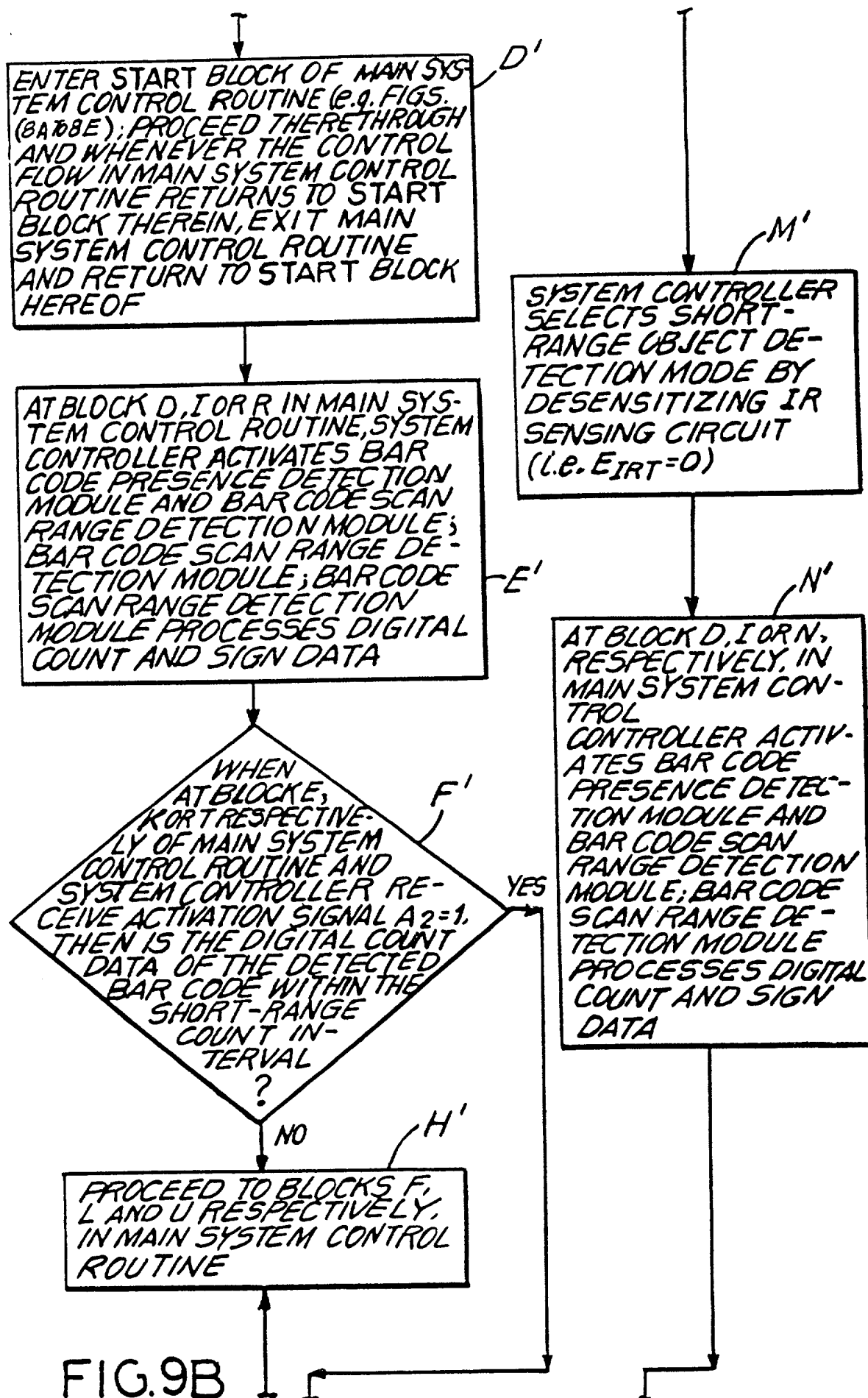


FIG. 9A



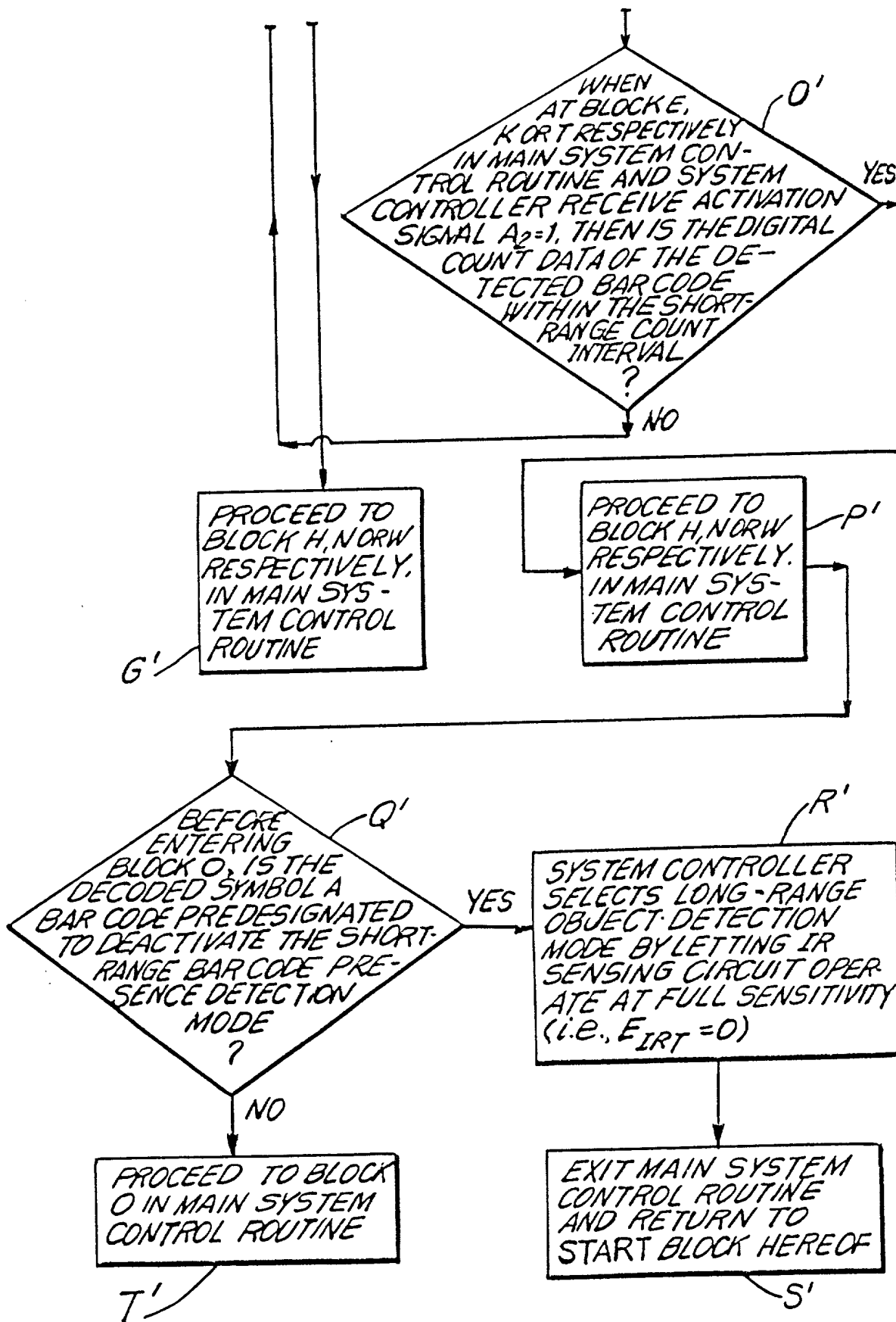
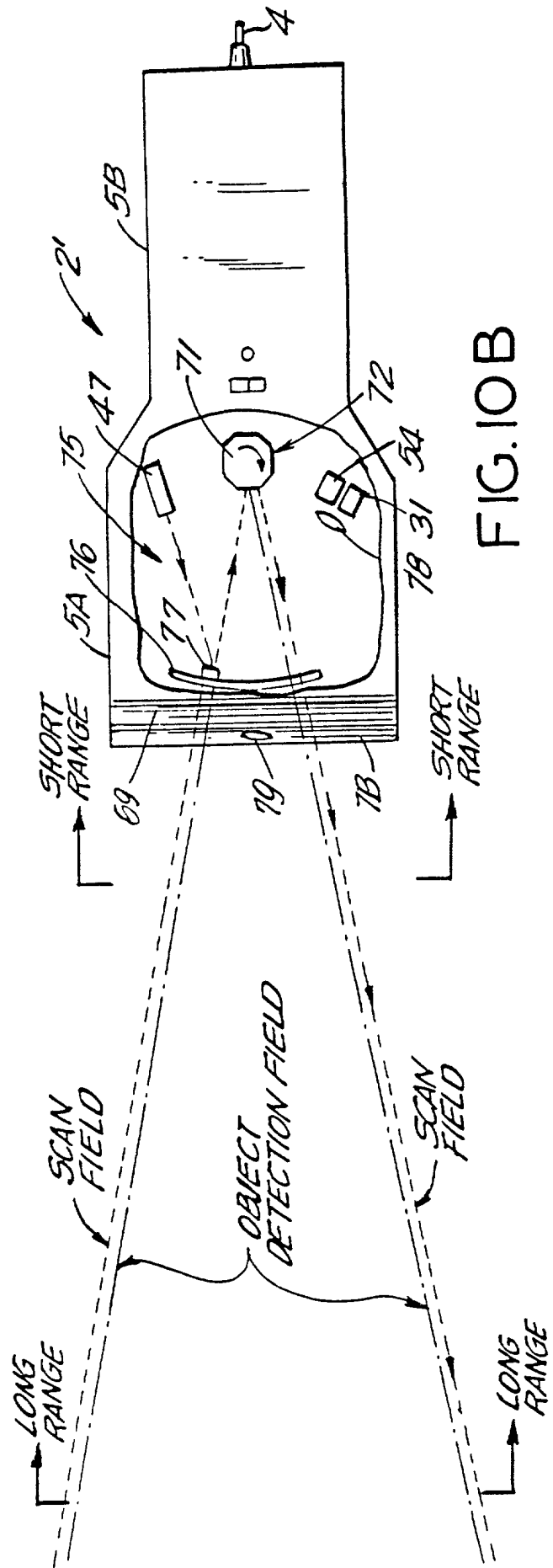
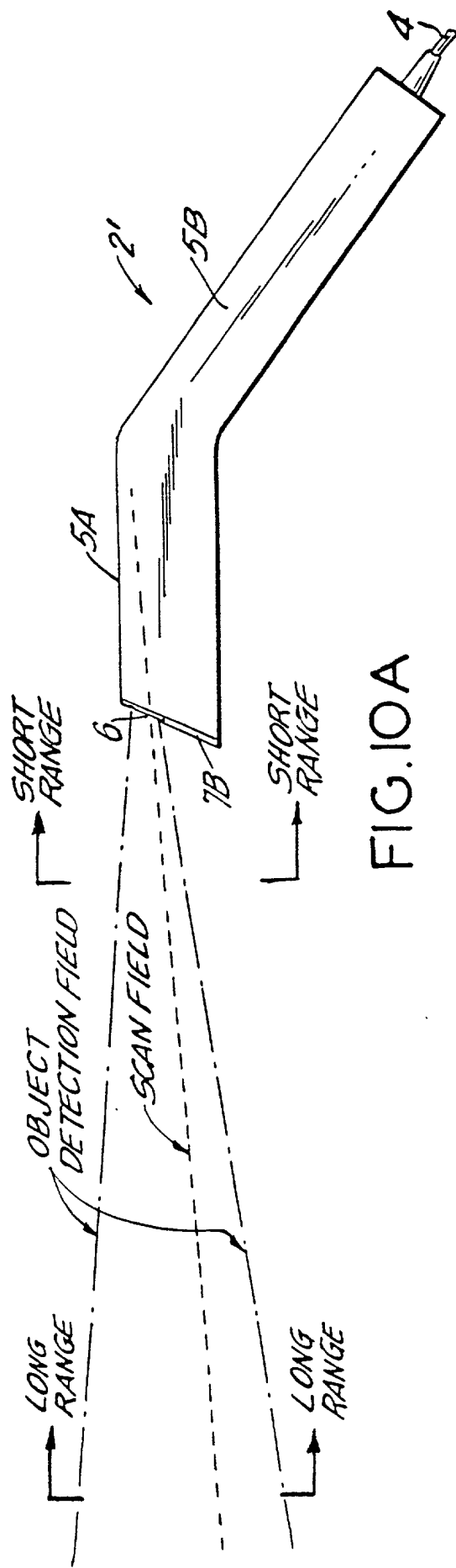


FIG. 9C



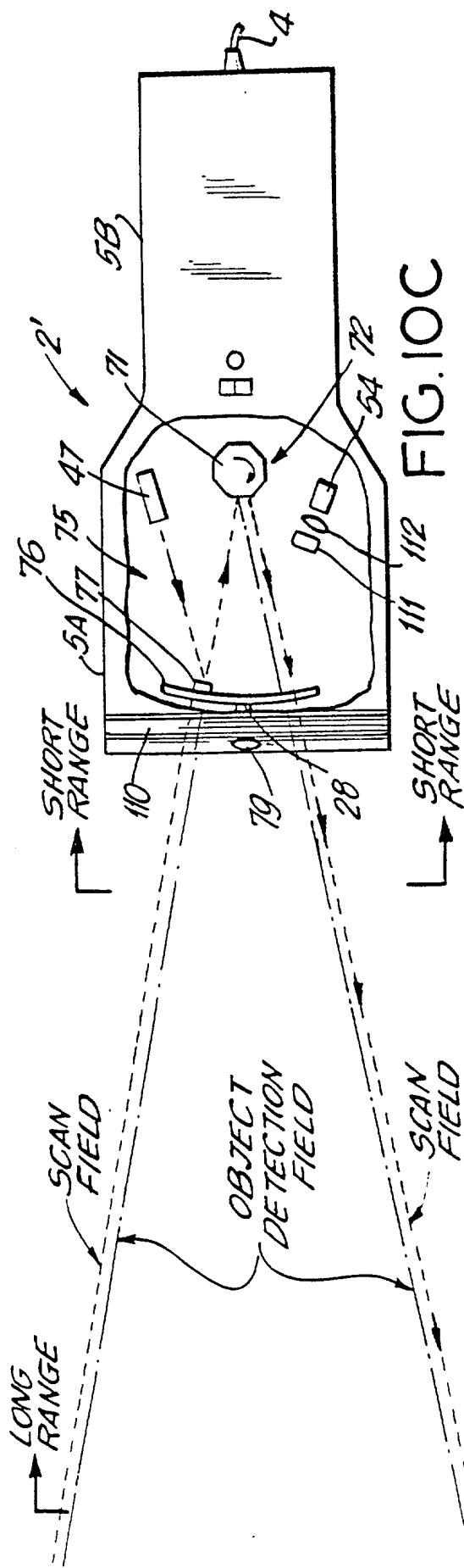


FIG. 10C

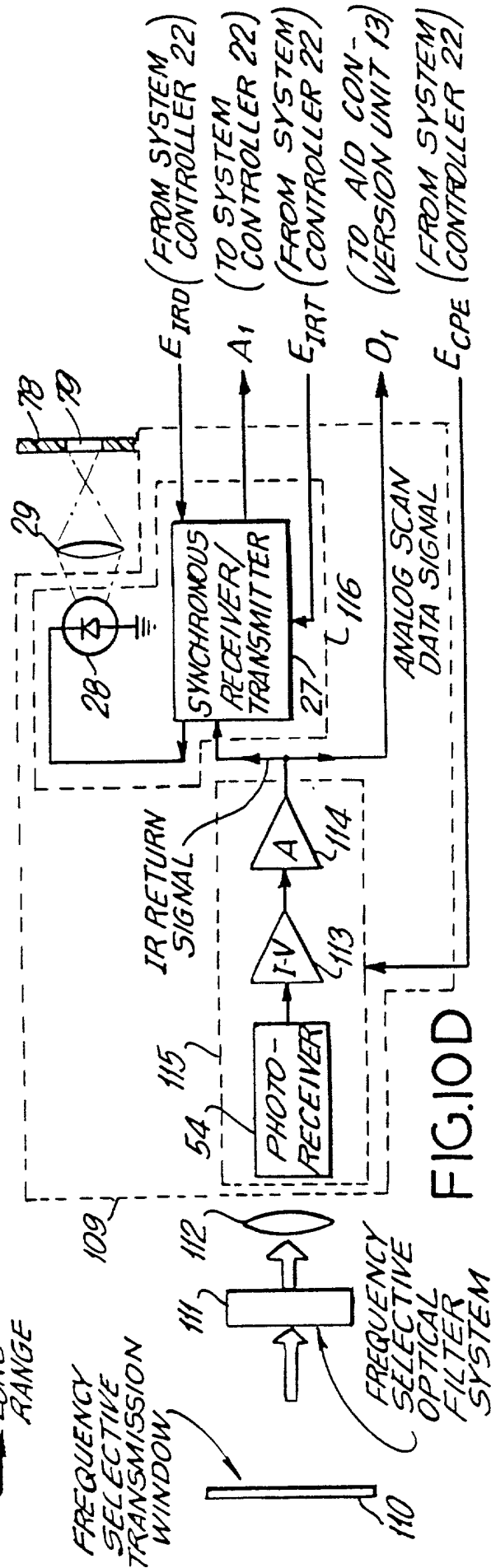
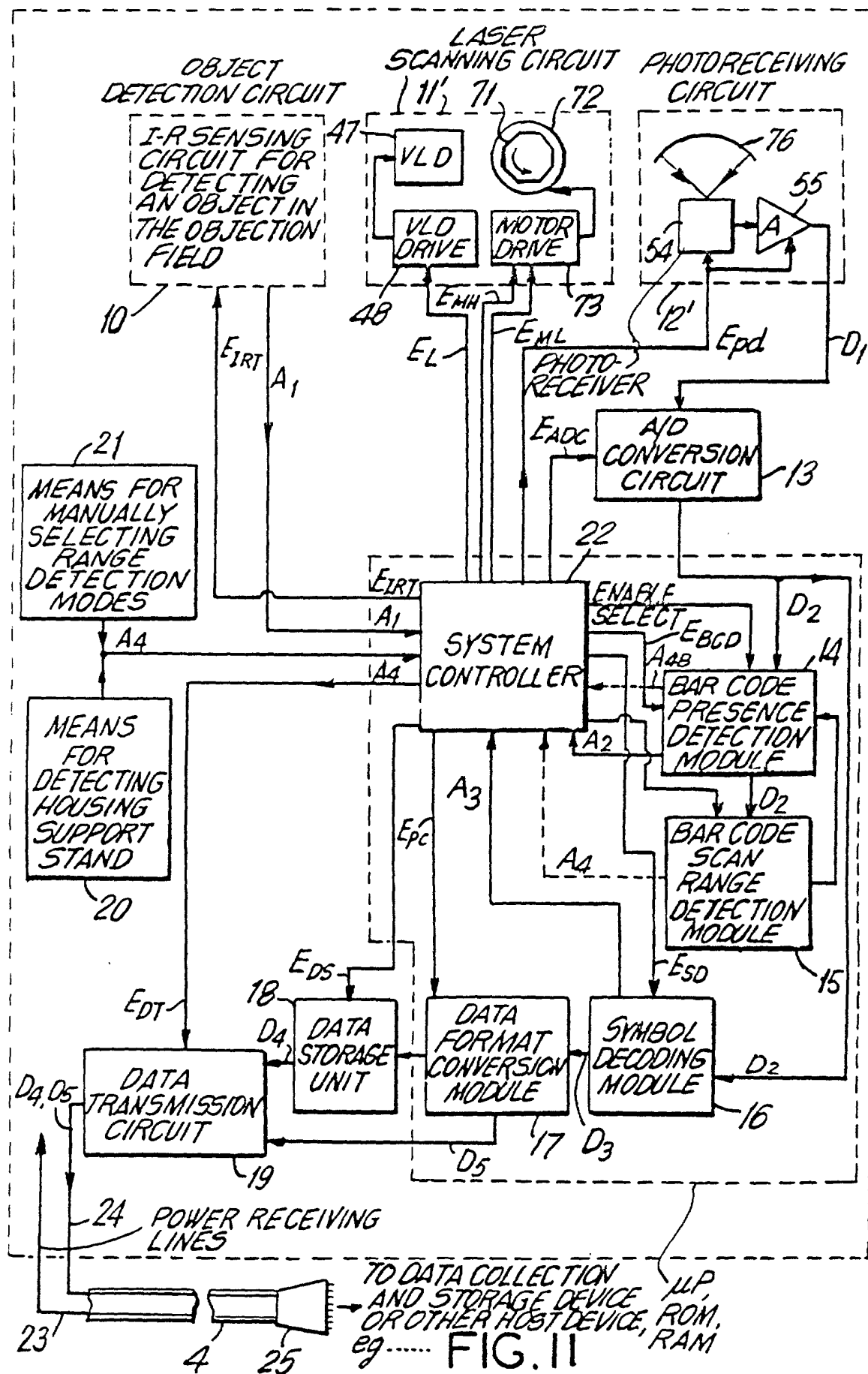


FIG. 10D





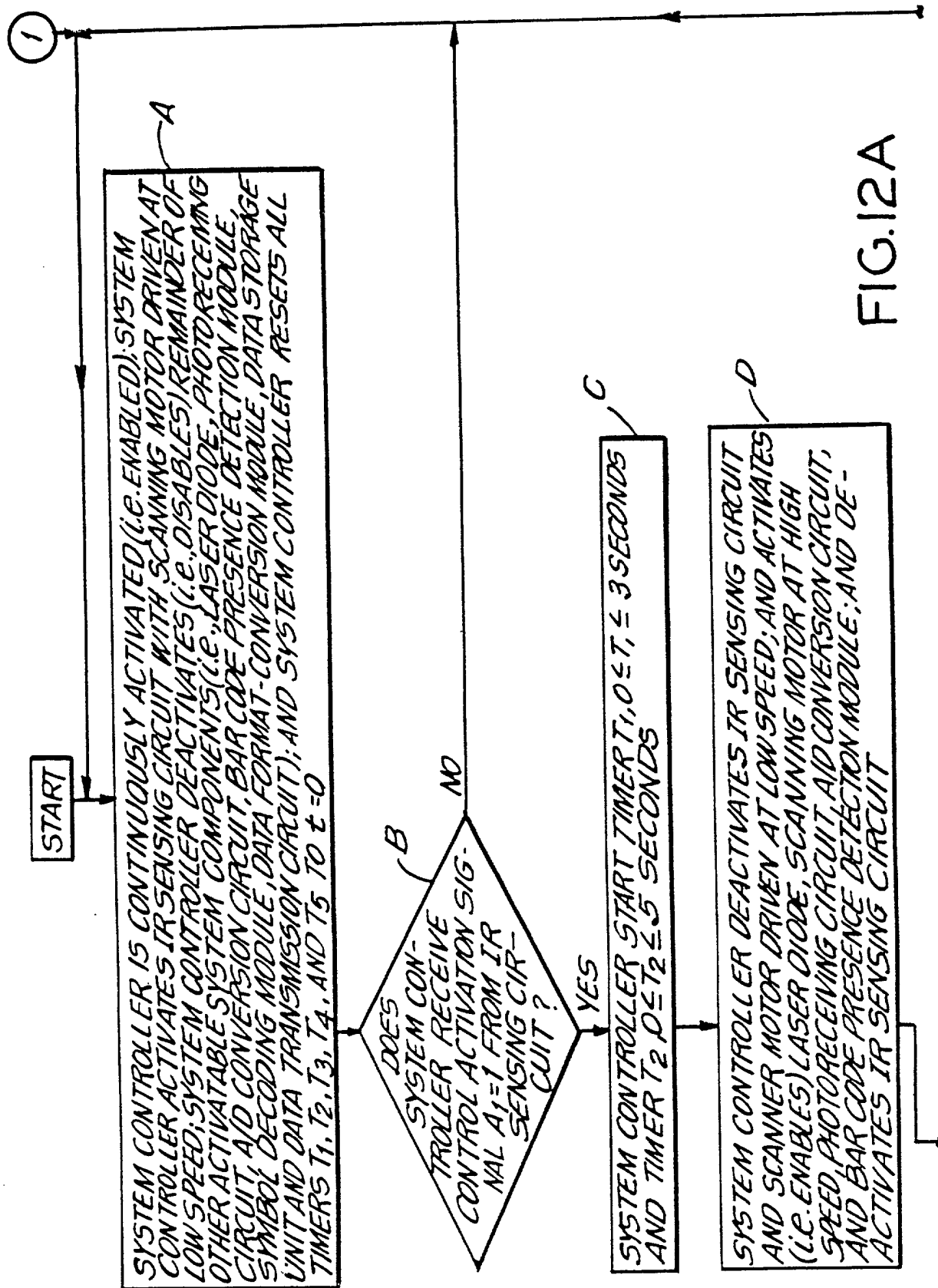


FIG. 12A

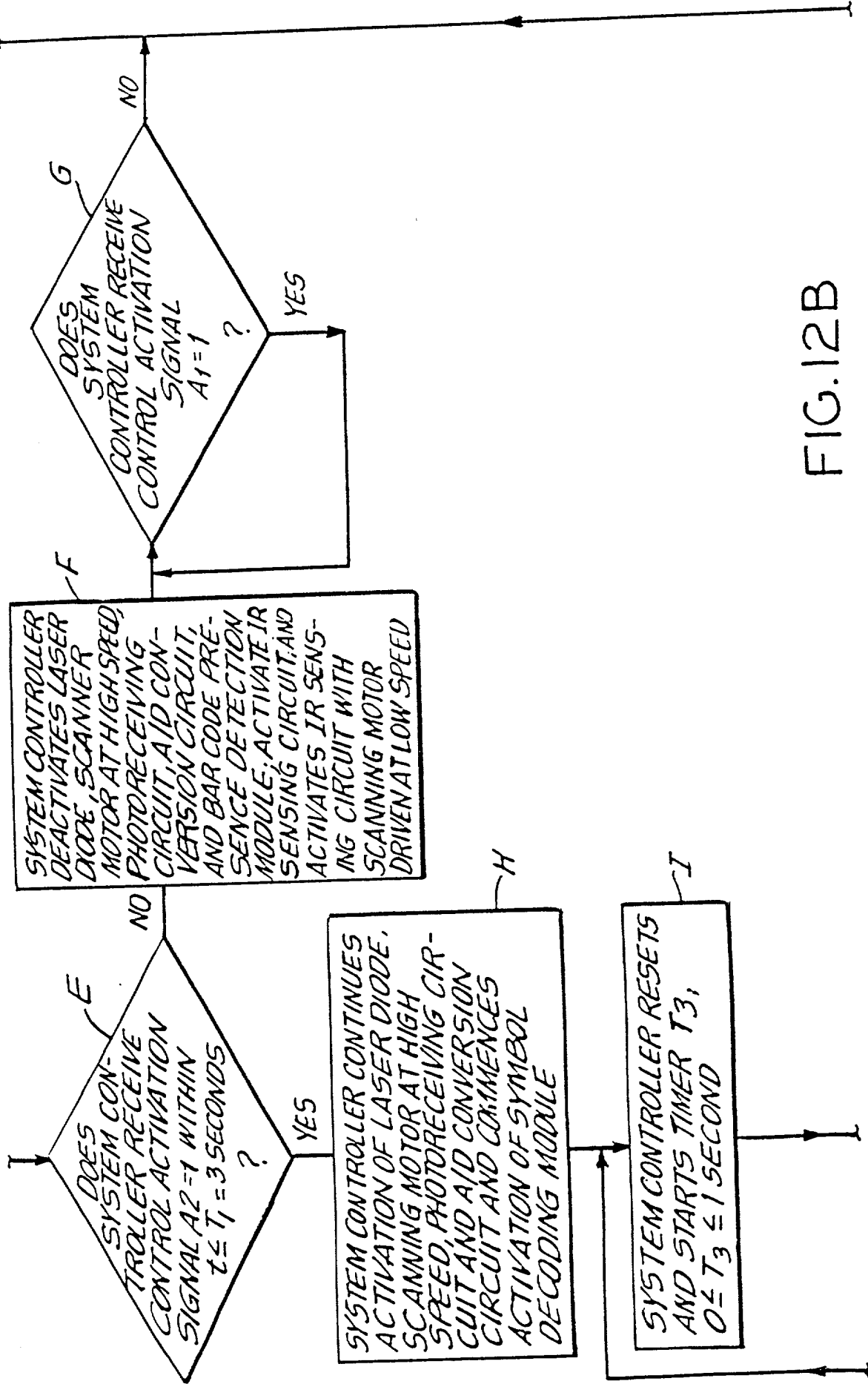


FIG. 12B

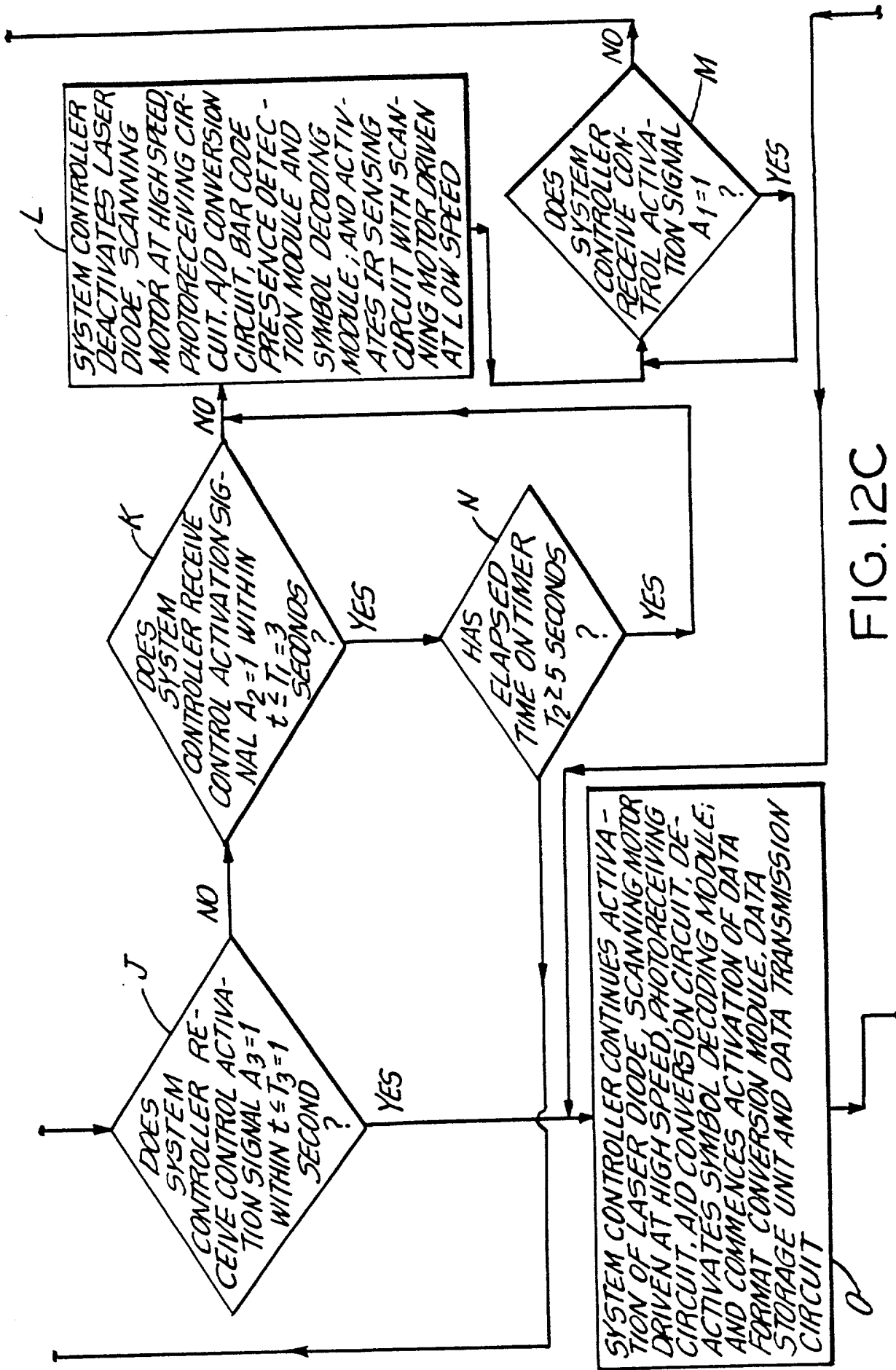


FIG. 12C

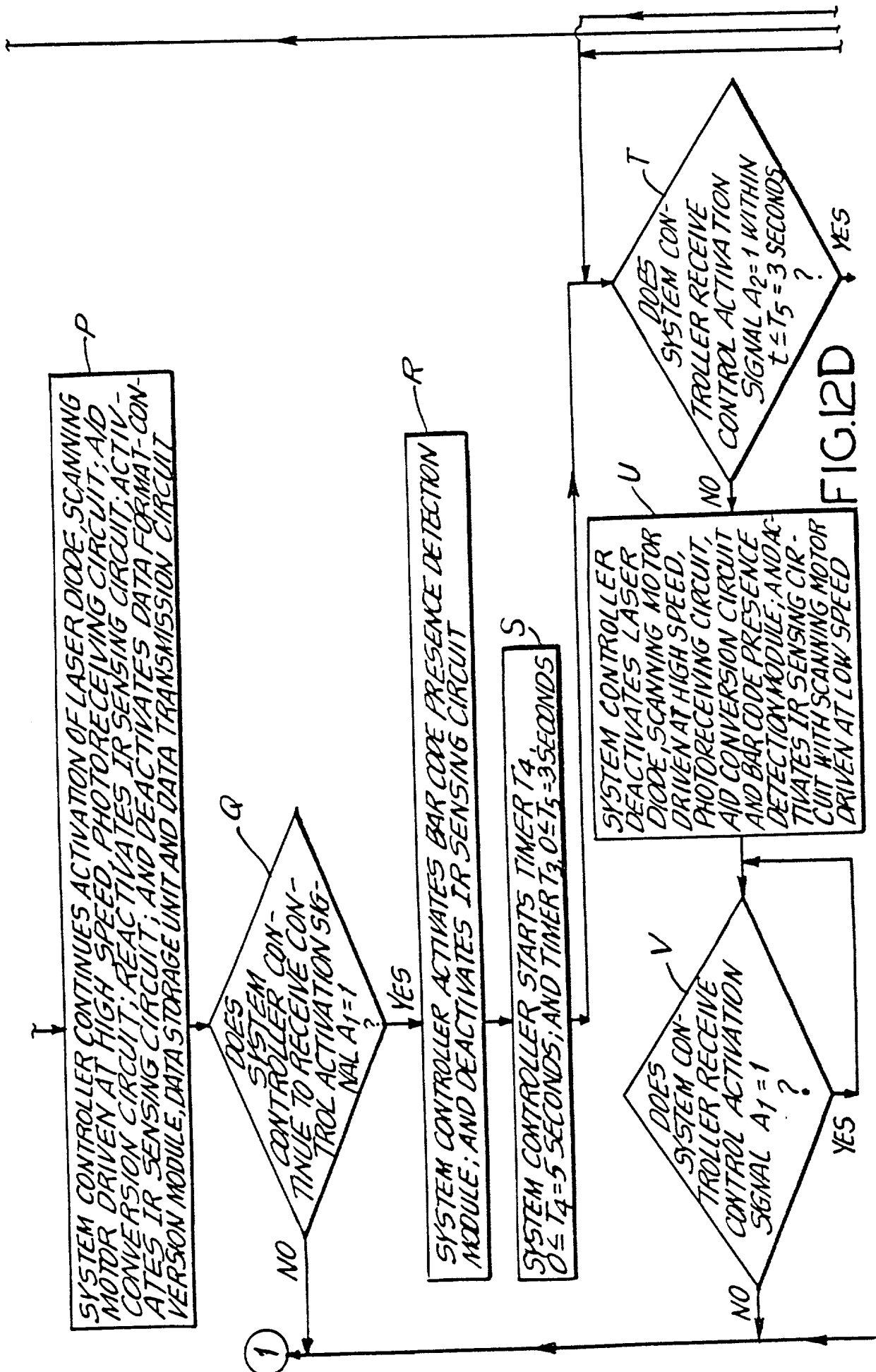


FIG. 12D

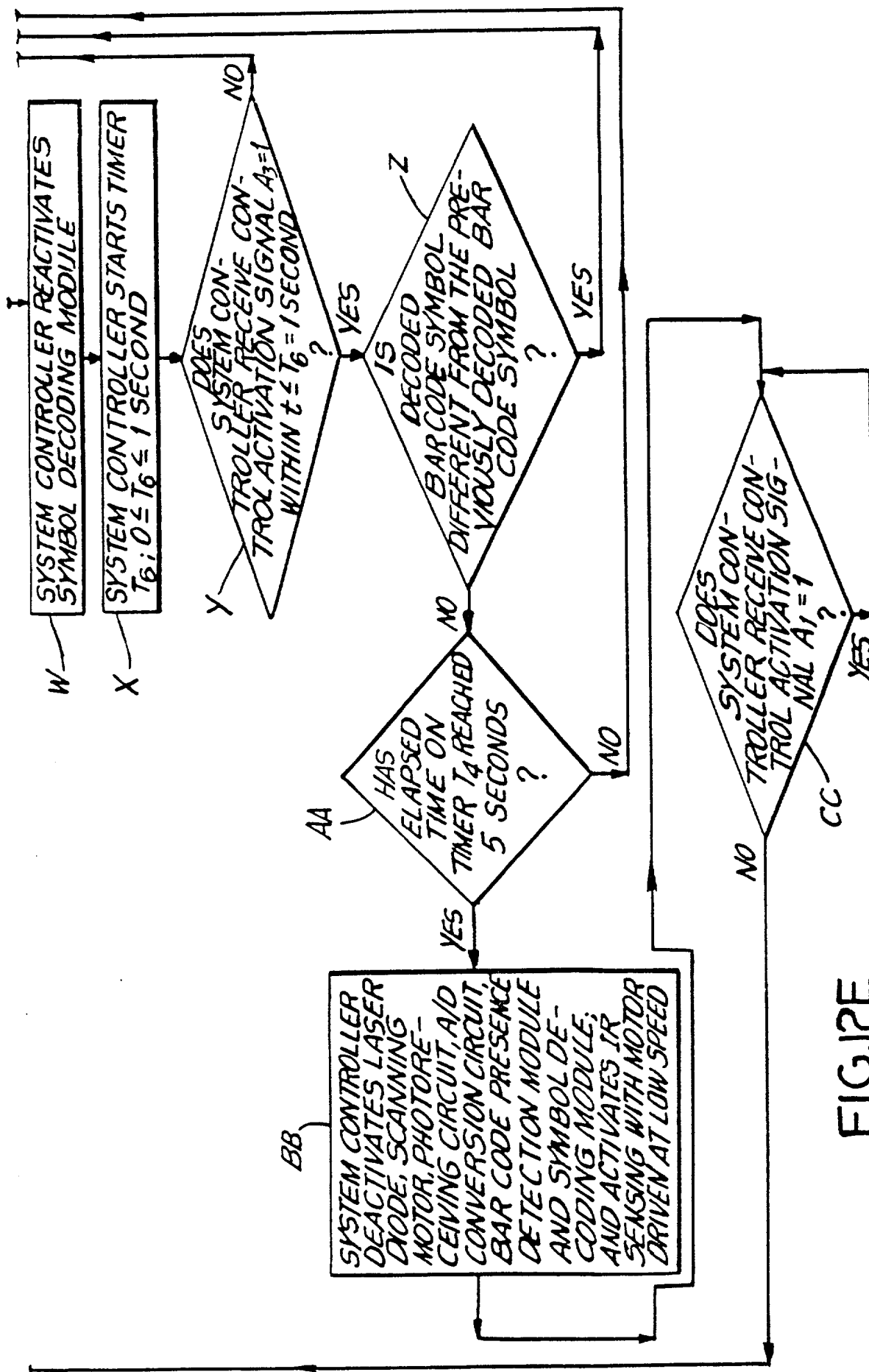


FIG.12E

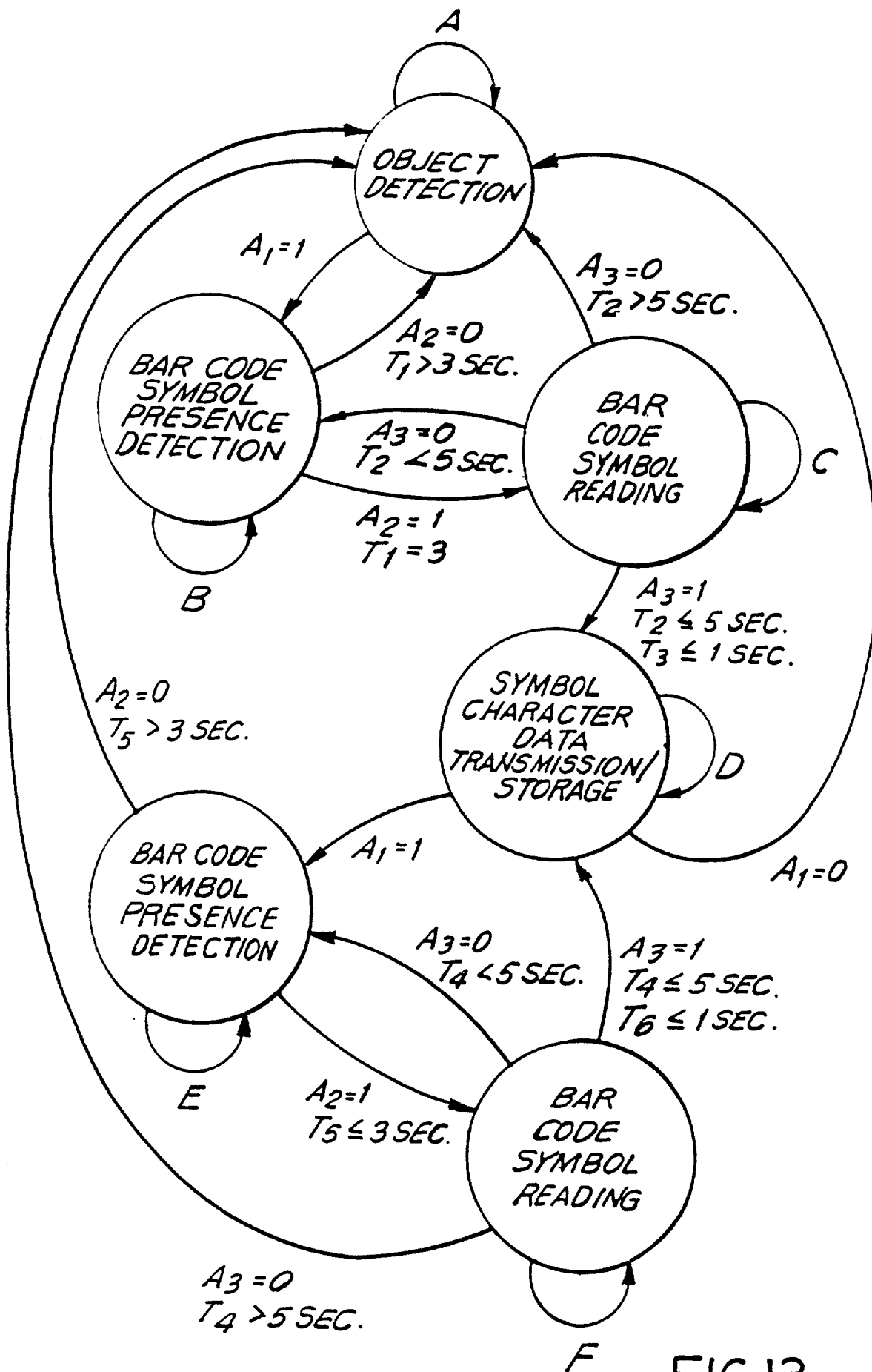
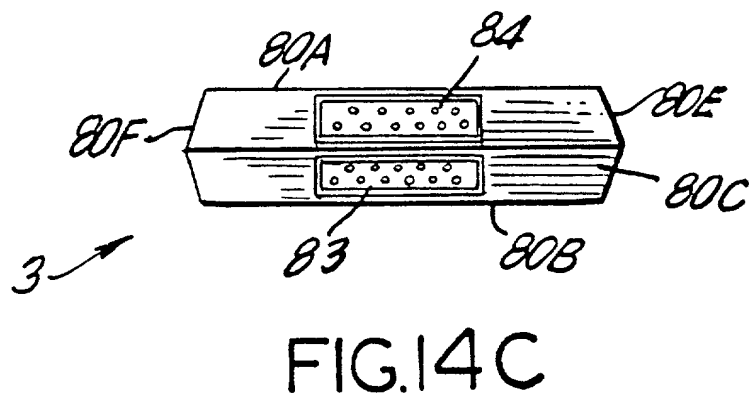
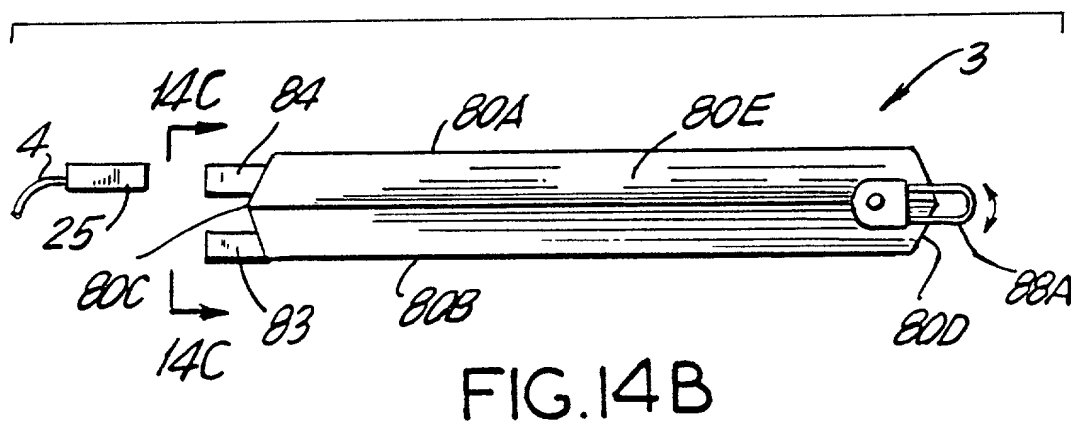
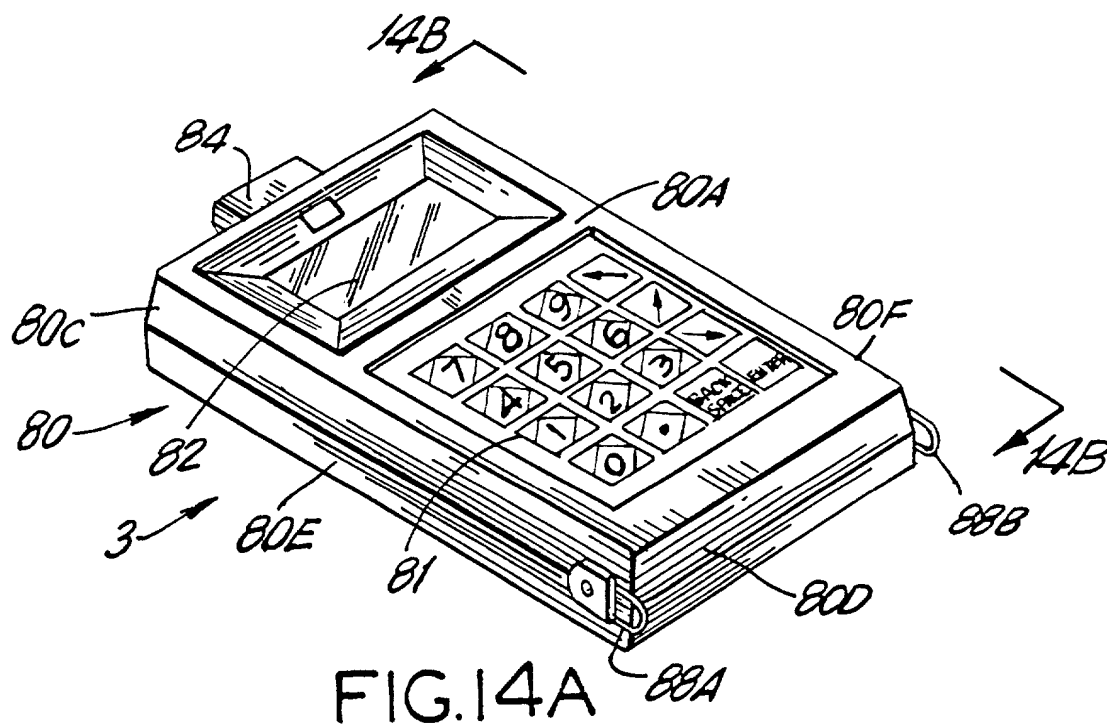


FIG.13



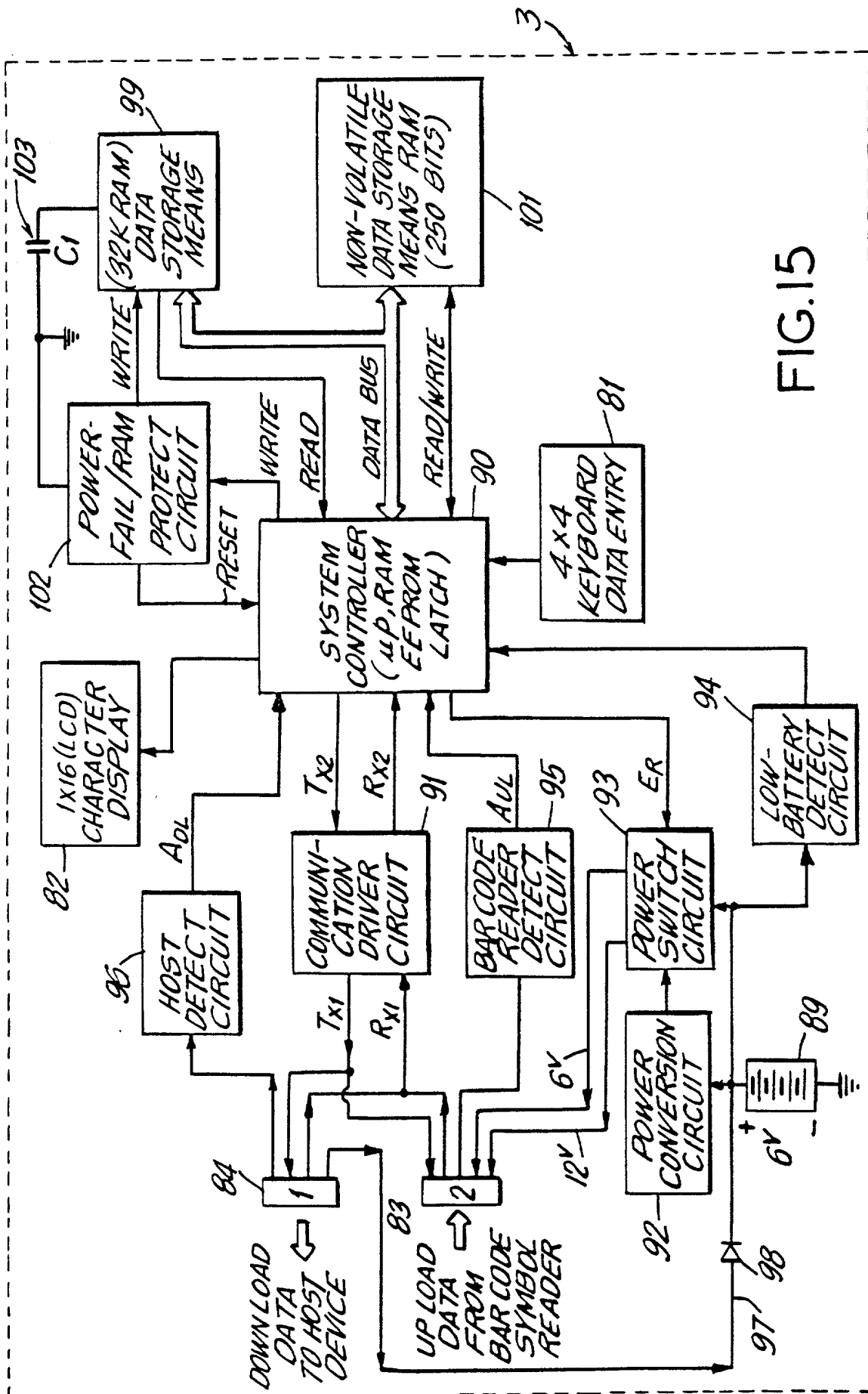


FIG.15



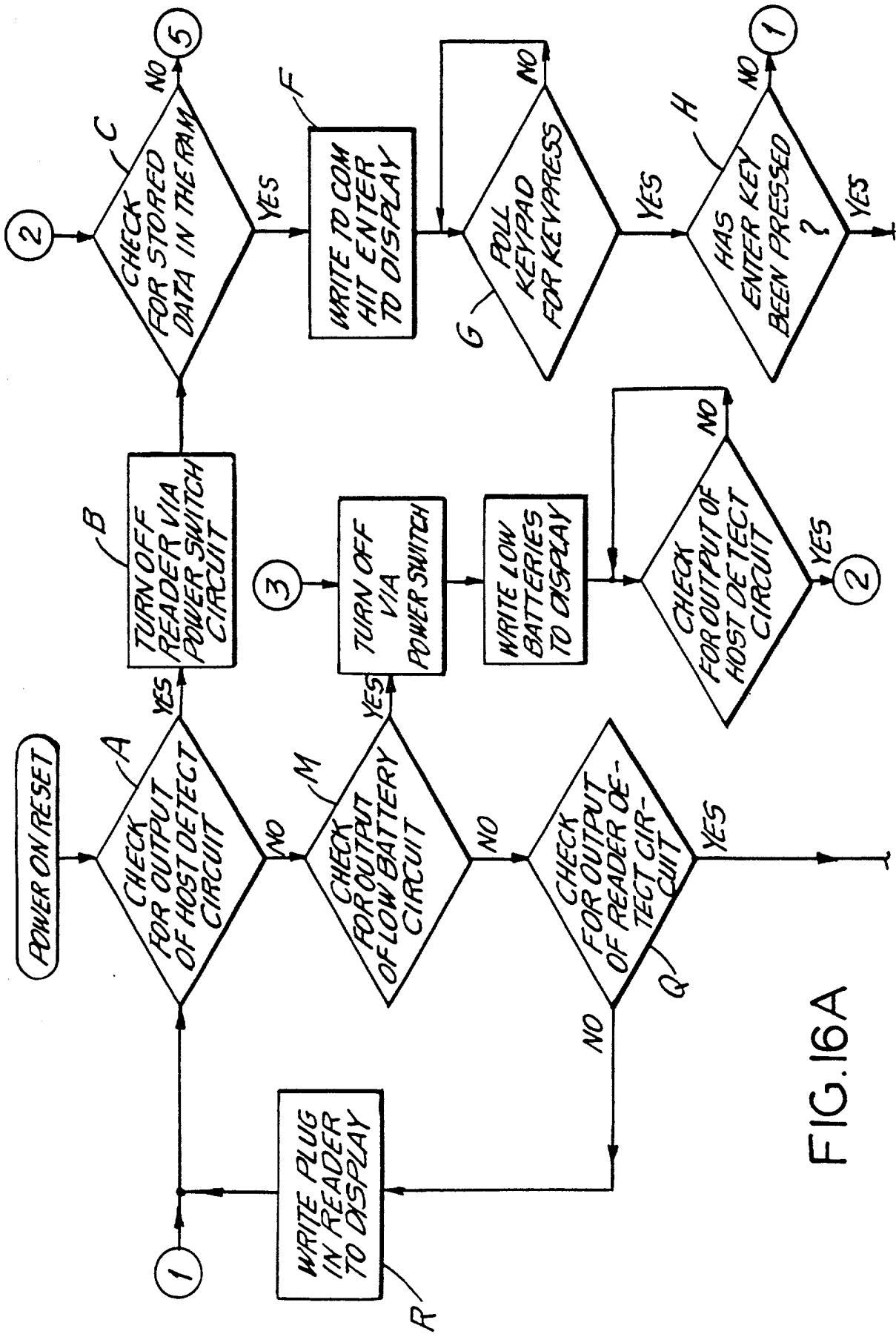


FIG. 16A

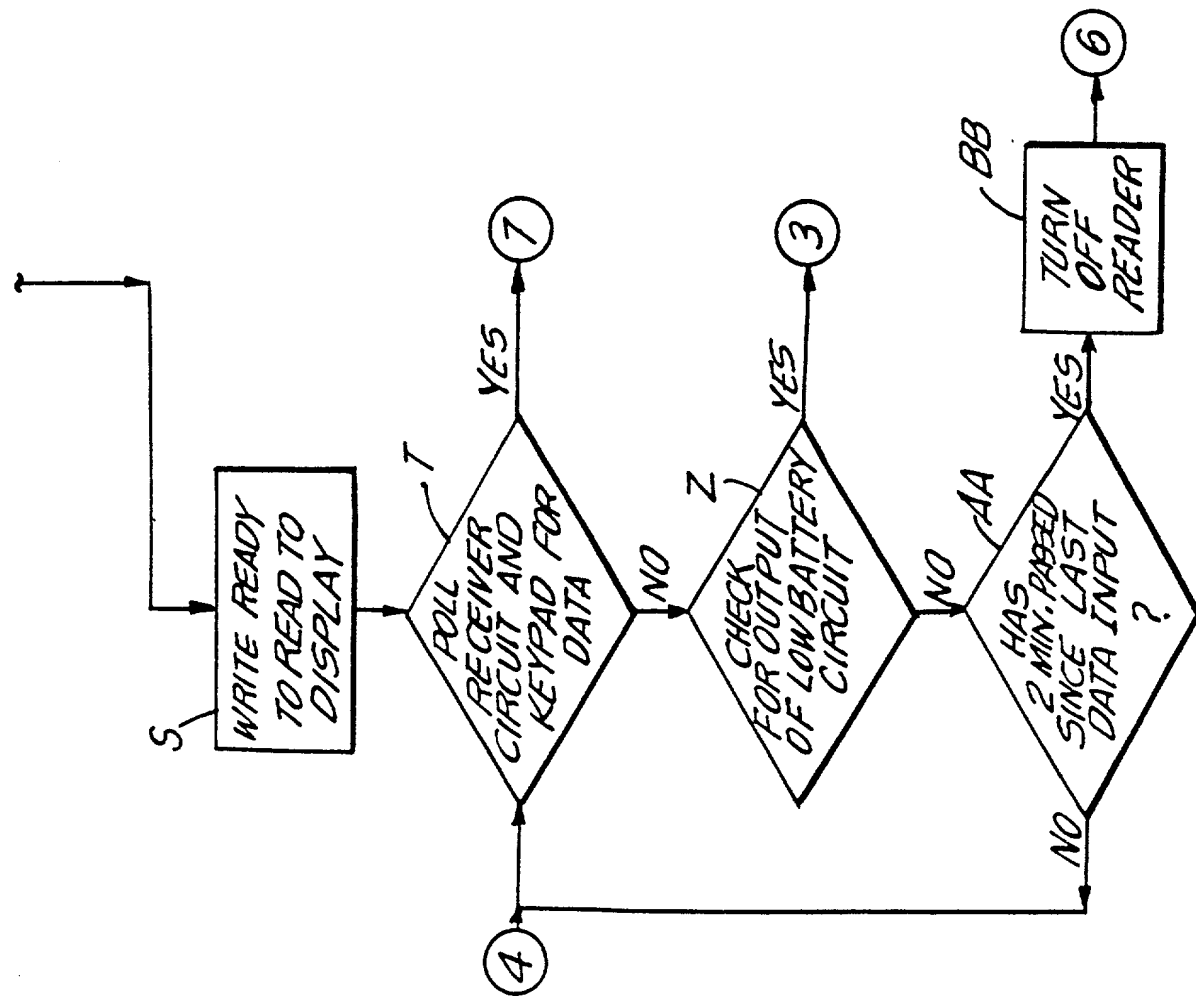
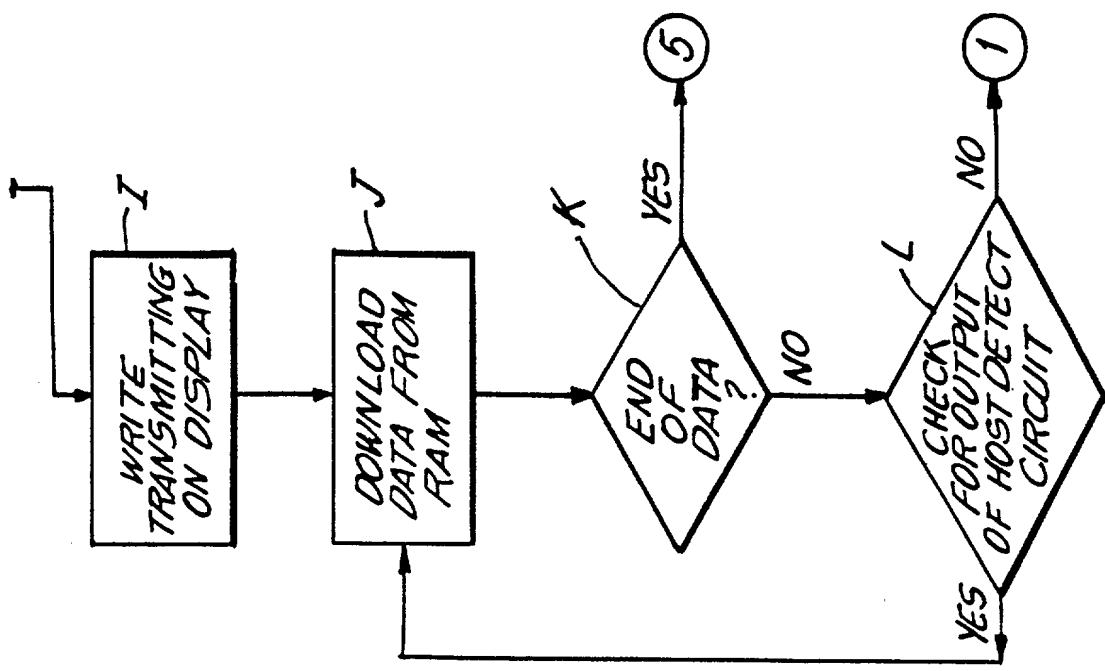


FIG.16B

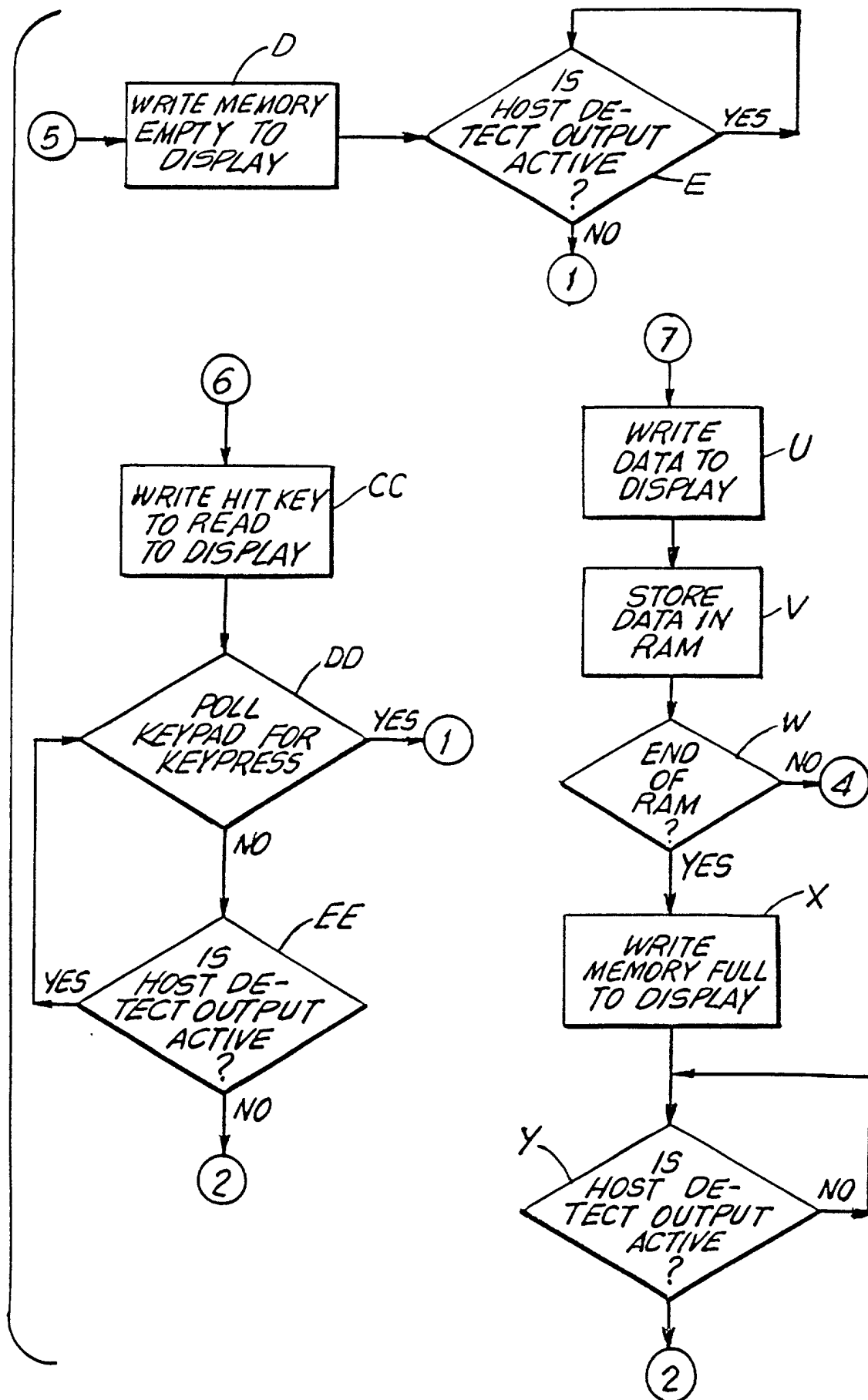


FIG. 16C